REMARKS

In the office action, claims were rejected under 35 U.S.C. §112, second paragraph as lacking a proper antecedent for "the fast feedback channel". Appropriate revisions to the claims have been made. In the office action, the drawings were objected too; appropriate revisions to Figures 1A and 1B and corresponding specification revisions have been made. Additionally, the specification was objected too. Appropriate corrections have been made. Claims 1 and 7 were rejected under 35 U.S.C. §102(a) as being anticipated by U.S. Patent No. 6,212,240 (Scheibel, Jr. et al.). Claims 2-6 and 8-9 were rejected under 35 U.S.C. §103(a) as being unpatentable over various combinations of Scheibel, Jr. et al., U.S. Patent No. 5,828,677 (Sayeed et al.), U.S. Patent No. 6,449,246 (Barton et al.), U.S. Patent No. 6,064,692 (Chow), and U.S. Patent No. 5,982,760 (Chen).

In the present invention as indicated by the revised claims, the encoding/data modulation scheme is adjusted with respect to the collected retransmissions statistics. If the collected retransmissions statistics indicating a low number of retransmission, a higher capacity encoding/data modulation scheme is selected. If the collected retransmission statistics indicate a high number of retransmissions, a lower capacity encoding/data modulation scheme is selected. Accordingly, the present invention optimizes the capacity of the channel by selecting an optimum encoding/data modulation scheme in respect to the current channel conditions. In

Scheibel, Jr. et al., a scheme is disclosed where data blocks are transmitted at a first high bandwidth data modulation scheme. Data blocks not successfully received are retransmitted at a lower data modulation scheme. Out of those blocks, blocks that were not received after the second transmission are sent at a third scheme. After all of the blocks have been transmitted, the system is reset to the highest modulation scheme and transmission is begun again. Accordingly, Scheibel does not disclose using a higher bandwidth modulation scheme in view of the collected retransmission statistics. Scheibel discloses only resetting the retransmission statistics automatically to a high bandwidth modulation scheme after successful transmission of all the data blocks and not on collected retransmission statistics. Scheibel allows for an approach that allows for a high amount of data transfer if channel conditions are good. Generally, if channel conditions are good, very few retransmissions will occur and most of the data will be transmitted, using the original modulation scheme. However, if channel conditions are extremely poor, the ramping down of transmission power and the number of retransmissions we use up considerable wireless overhead. The present invention uses a scheme adapts the modulation scheme to the current channel conditions and attempts to select the optimum modulation encoding scheme based on these conditions. None of the other prior art references disclose such an arrangement either.

Reconsideration and entry of this amendment is respectfully requested.

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Enclosures

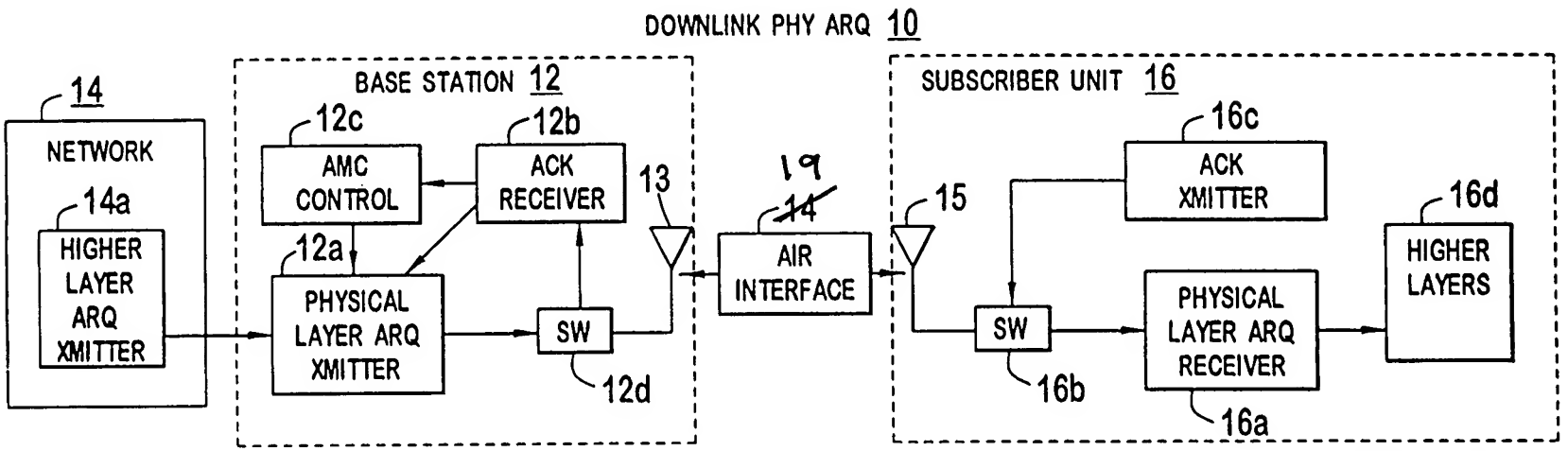

FIG. 1A

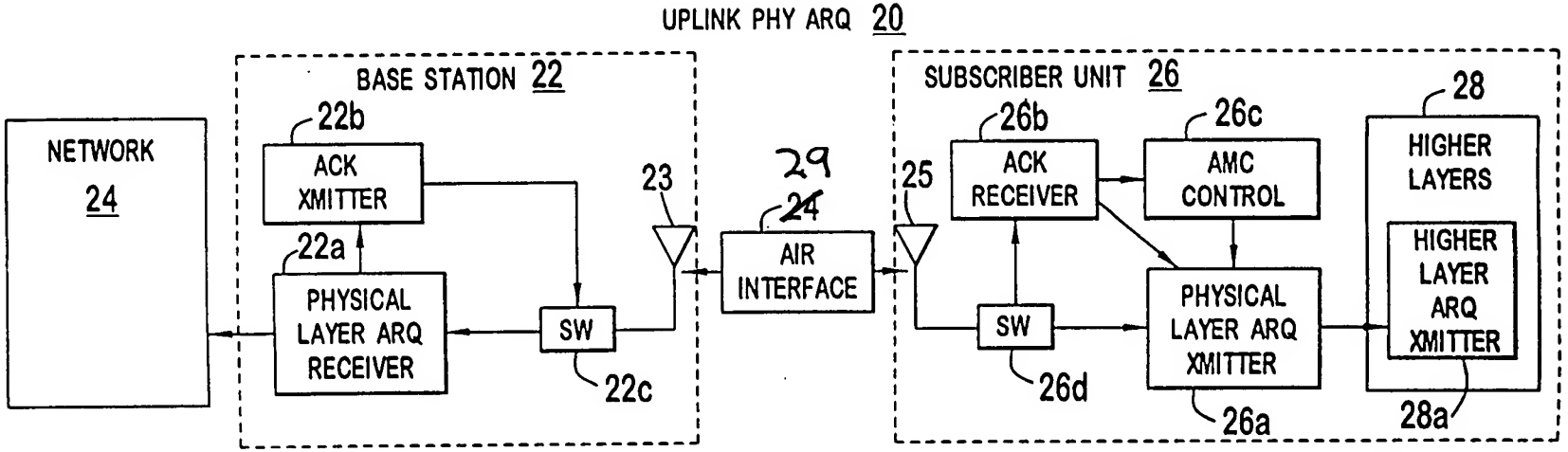

FIG. 1B